

**DRAFT FINAL  
EXPANDED ENGINEERING EVALUATION/COST ANALYSIS (EEE/CA)  
FOR THE  
McLAREN TAILINGS SITE  
COOKE CITY, MONTANA**

Engineering Services Agreement DEQ/MWCB 401027  
Task Order Number 05

**Prepared for:**

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## 10.0 PREFERRED ALTERNATIVE

Based on the conclusions of the detailed analysis and comparative analysis of alternatives, Alternative 5b: On-Site Disposal in an Un-Lined Repository with a Multi-Layered Cap is recommended as the preferred alternative for the McLaren Tailings Site. In summary, this alternative consists of completely removing the tailings impoundment and dam, waste rock dump, and OSC wastes (approximately 267,200 cubic yards), and disposing of the materials in an on-site repository constructed on the elevated bench located southwest of the current location of the tailings impoundment. Under Alternative 5b, the repository would be constructed to allow positive drainage with maximum side slopes of 4H:1V. The multi-layered cap would consist of an impermeable liner, a drainage layer, and the vegetated cover component of the cap would be 2-feet thick (minimum) (see Figure 7-9).

This alternative is projected to reduce risks to human health by 96 percent and reduce ecologic risks by 98 percent. The alternative is expected to attain all ARARs; and is expected to comply with the risk reduction goals for the site.

If Alternative 5b is chosen to be implemented at the site, the proposed repository area would need to be thoroughly investigated (prior to completing the detailed reclamation design for the site) to document geotechnical properties (i.e., soil texture, soil strength, compaction characteristics, depth-to-bedrock, etc.) and to confirm the characteristics and suitability of the material as cover soil. Additionally, installation of groundwater monitoring wells in this area is recommended to document depth-to-groundwater and associated static water level fluctuations. These data are necessary to determine the vertical separation between the bottom of the repository and seasonal high groundwater levels. Based on topographic data, it appears that over 20 feet of vertical separation between the bottom of the repository and the water table would be achieved (see Figure 7-6).